

Long-term, direct impacts would be the same as the No Action Alternative. No new access roads would be constructed. The existing transmission line components span 1.2 miles (18 acres) of Waters of the United States.

Alternative 1 includes 47 work sites temporarily impacting 18.8 acres. Using the EPMs and given the flexibility in siting these temporary work sites, direct impacts to wetland habitat would be unlikely. No long-term or indirect significant impacts are anticipated.

#### **4.16.2.5 IMPACTS FROM ALTERNATIVE 2—NEW TRANSMISSION O'BANION SUBSTATION TO ELVERTA SUBSTATION AND REALIGNMENTS**

Alternative 2 is the same as the Proposed Action from O'Banion Substation to Elverta Substation, but does not include the reconductoring work south of Elverta. This alternative intersects 1.4 miles (18.5 acres) of wetland habitat within the existing and new ROW. Approximately seven new or realigned structures are near wetland habitats. New construction could temporarily impact up to 1.4 acres of wetlands resulting in long-term, direct impacts to 0.7 acre of wetlands. If access to seven new structures requires crossing wetland habitat, the resulting impact could be up to 1.4 miles or 2.6 acres of long-term impact. Limited, indirect impacts could occur over time due to increased access to previously inaccessible areas. The amount of access being added is small and additional access is controlled by EPMs. The resulting indirect impacts would be insignificant. New transmission line components would span 0.3 mile (4.5 acres) of Waters of the United States. Alternative 2 includes 14 work sites temporarily impacting 5.6 acres. Using the EPMs and given the flexibility in siting these temporary work sites, direct impacts to wetland habitat would be unlikely. No long-term or indirect significant impacts are anticipated.

#### **4.16.2.6 IMPACTS FROM ALTERNATIVE 3—NEW TRANSMISSION ELK GROVE SUBSTATION TO TRACY SUBSTATION**

Alternative 3 intersects 3.1 miles (47.3 acres) of wetland habitat within the new ROW. Approximately 16 new structures would be constructed near wetland habitats. New construction could temporarily impact up to 3.7 acres of wetlands, resulting in long-term, direct impacts of 1.6 acres of wetlands. If access to 16 new structures requires crossing wetland habitat, the resulting impact could be up to 3.2 miles or 5.9 acres of long-term impact. Limited, indirect impacts could occur over time due to increased access to previously inaccessible areas. Access would be controlled by EPMs. The resulting indirect impacts would be insignificant. The new transmission line components would span 0.7 mile (10.5 acres) of Waters of the United States. Alternative 3

includes 19 work sites that would temporarily impact 7.6 acres. Using EPMs and given the flexibility in siting these temporary work sites, direct impacts to wetland habitat would be unlikely. No long-term or indirect significant impacts are anticipated.

#### **4.16.2.7 IMPACTS FROM THE NO ACTION ALTERNATIVE**

Without the Proposed Action or alternatives, significant changes to existing facilities or alignment would not occur. No new impacts to wetlands would be expected. Normal operation, maintenance, repairs, and emergency management of the system would continue as in the past. There are recognized temporary and insignificant impacts associated with maintaining access and transmission service.

### **4.17 CUMULATIVE IMPACTS**

Cumulative impacts result from the incremental effect of the action, decision, or project when added to other past, present, and reasonably foreseeable future actions. Requirements for addressing cumulative impacts are to gather and analyze enough data to make a reasoned decision concerning these impacts. Western examined actions that have environmental impacts on the same resources affected by this proposal and similar projects. Western also reviewed other proposed projects including major linear projects that would potentially create impacts on the same resources.

For past actions, Western included existing transmission lines in the study area. Impacts from these past projects were considered for each resource area.

#### **4.17.1 REASONABLY FORESEEABLE PROJECTS**

Table 4.17-1 contains a list of reasonably foreseeable projects. The proposed projects include power generation that would require construction of new transmission lines and interconnection to the Sacramento area power grid.

Cumulative effects for floodplains, geology, soils, health and safety, land use, noise, and wetlands are expected to be negligible. A description of cumulative effects is provided below for air quality, biological resources, cultural resources, electric and magnetic fields, paleontological resources, socioeconomics and EJ, visual resources, and water resources.

#### **4.17.2 AIR QUALITY**

Within the Sacramento area, particulate emissions, VOCs, and NO<sub>x</sub> from construction activities, rice field and agricultural burning, industrial operations (aggregate mining), and vehicle equipment may all impact air quality. Constructing new transmission lines or reconduc-

toring existing lines add to these emissions, but only for the short term. Western would use EPMs to reduce particulate emissions, VOCs, and NO<sub>x</sub>. Therefore, cumulative impacts of the Proposed Action and alternatives, coupled with other area projects, would be considered unavoidable short term impacts. Long-term operation under the Proposed Action or any alternative, along with transmission and other projects in the general area, would not generate long-term significant amounts of air pollution emissions.

#### 4.17.3 BIOLOGICAL RESOURCES

For the short term, the Proposed Action, Alternative 2, and Alternative 3 would affect nonurban areas or areas not developing rapidly that may contain sensitive biological habitat. Much of the study area remains rural, and is expected to remain rural for the near term not affecting these habitats. Although bird strikes would continue, transmission line marking devices and locating new lines next to existing lines would result in lower additive cumulative impacts. Western should be able to satisfactorily avoid or mitigate impacts to biological resources. Cumulative impacts resulting from the Proposed Action, Alternative 2, or Alternative 3, and other area projects would not be significant.

The impacts to vegetation as a result of Alternative 1, reconductoring, would be temporary, as these areas would be replanted following the work. As a result, cumulative impacts to biological resources would be minimal.

#### 4.17.4 CULTURAL RESOURCES

Impacts from the alternatives would be limited to incremental physical impacts to cultural resources located within the existing ROW. Most new transmission lines would be located in areas with other transmission lines where the visual effects would also be incremental.

Western should be able to satisfactorily avoid or mitigate impacts on prehistoric and historic archaeological sites. The potential to avoid or mitigate impacts on TCPs is less clear, although tribal groups would be involved in assessing impacts and identifying and implementing avoidance or mitigating measures.

With adherence to the EPMs, it is likely that the Proposed Action, Alternative 2, and Alternative 3, all of which include building new transmission lines, would only add slightly to the cumulative impacts on the cultural resources of the region. Alternative 1, which only includes reconductoring, would not add to the cumulative impacts on the cultural resources of the region.

#### 4.17.5 ELECTRIC AND MAGNETIC FIELDS

In discussions with planning agencies, Western determined that no new permanent, occupied buildings are planned within 100 feet of Western's ROWs. Because EMFs diminish rapidly with distance from the transmission line, and there is no planned encroachment to the ROWs, there would be minimal EMF cumulative impacts to human health or the environment.

#### 4.17.6 PALEONTOLOGICAL RESOURCES

Impacts to paleontological resources could result if fossil materials are destroyed during excavation in depths of 10 feet or greater. Continued development extending farther into the Central Valley could disturb fossil-bearing sedimentary deposits and potentially damage paleontological resources. The cumulative impact is related to the increasing disturbance or removal of fossil-bearing rock. With proper site monitoring, the potential for loss of paleontological resources would be minimal, and cumulative impacts would be negligible.

**Table 4.17-1. Projected Projects with Related Transmission Lines**

Project	Proponent	County	Size (MW)	Interconnect	In Service Date	Comments or Date Approved
East Altamont Energy Center	Calpine	Alameda	1,100	Western	5/04	Online May, 2004
SMUD Cosumnes Power Plant Project Combined Cycle	SMUD	Sacramento	1,000	SMUD	10/04	Online October, 2004

Source: Original and California Energy Commission (CEC) web site <http://www.energy.ca.gov/sitingcases/current.html> August 2002

MW: megawatt

SMUD: Sacramento Municipal Utility District

#### 4.17.7 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

Under the No Action Alternative, the current strain on electric power supply and distribution would continue, which could result in power supply shortfalls and disruptions as additional demands for power are made to support future development. These supply and distribution difficulties could decrease the efficiency of business operations in the study area and have an adverse effect on the overall economy. Other related spending in local markets would continue as beneficial economic effects.

#### 4.17.8 VISUAL RESOURCES

Past, existing, and future development have and would continue to visually alter the landscape. Negative effects to the visual quality of the area from development include existing utility lines and associated cleared ROWs, commercial development, major roads, abandoned buildings, industrial land uses, aggregate mining, and sand and gravel pits. Where the alternative would be located near one of these existing negative visual features, the impacts would result in an additive adverse effect to the existing visual impacts. However, locating the proposed transmission line adjacent to an existing utility corridor would typically be preferable to locating the line in a previously undisturbed landscape. The additive cumulative impacts for any alternative would not be significant.

#### 4.17.9 WATER RESOURCES

Growth and development in the Sacramento area would increase water demand. Construction activities projected for the Proposed Action and alternatives would cause slight increases in surface-water sediment load and water use. These effects would be transitory. Incremental increases in surface-water sediment load from maintenance would not result in significant cumulative impacts.

### 4.18 UNAVOIDABLE ADVERSE IMPACTS

Unavoidable adverse impacts are defined as those impacts that could not be reduced to less than significant levels through EPMs (Table 3-4), other mitigation measures, or using another alternative. Short-term significant unavoidable impacts for air emissions ( $PM_{10}$ , VOCs, and  $NO_x$ ) would occur for the Proposed Action and alternatives.

#### 4.19 SHORT-TERM USES VERSUS LONG-TERM PRODUCTIVITY

During the 50- to 60-year life of the transmission line, the construction phase for the Proposed Action would cause the most ground disturbance, with 581 acres of temporary disturbance to the physical environment. Impacts would include approximately 414.5 acres of new ROW, 76 acres for transmission structure installation, 50.9 acres for access roads, 19.6 acres for pulling sites and approximately 20 acres for material storage areas.

After construction, the majority of disturbed areas, including new ROW, pulling sites, material storage areas, and structure sites, would be reclaimed to preconstruction use. Permanent land dedicated to the facilities, resulting in about 66 acres, would experience long-term disturbance for the transmission structures and access roads.

Potential adverse effects to air quality would be short term, mainly localized, and result from construction. These short-term impacts would exceed regulatory thresholds for  $PM_{10}$ , VOC, and  $NO_x$  emissions. Short-term and long-term impacts to soils and water quality would occur. Accelerated soil erosion would occur, particularly on steep slopes, from construction. Water quality impacts would be limited and short term.

Potential effects to biological resources, including sensitive plant species, sensitive habitats, and wildlife, primarily would be long term due to the permanent removal of vegetation and other wildlife species habitat. Habitat recovery in areas of temporary disturbance would vary according to the vegetation type and the presence or absence of special-status rare plant species.

Impacts to historical resources, related to additive adverse visual effects, would be for the life of the project, if facilities were removed when no longer needed. Similarly, direct physical impacts to Native American sites and paleontological resources are considered long term (permanent) and nonrenewable.

Potential land use effects would be largely short term and result from construction noise, dust, and equipment operations. Short-term impacts would occur primarily to recreational uses. Agricultural practices could continue on most of the ROWs, except where structures are proposed. Overall, transmission line corridor productivity would remain similar to existing conditions. Land uses would not change, except where access road spurs and structures would be located.

Visual effects would be both short term and long term. Long-term additive impacts would result from the presence of the new transmission lines. Visual impacts would be somewhat increased during construction due to the presence of equipment and related fugitive dust. Noise and transportation effects would be short term and would result from construction activities.

#### 4.20 IRREVERSIBLE/IRRETRIEVABLE COMMITMENT OF RESOURCES

Resources committed to the proposed project would be material and nonmaterial, including financial resources. Irreversible commitment of resources means that those resources, once committed to the project, would continue to be committed throughout the 50- to 60-year life of the Proposed Action and alternatives. Irretrievable commitment of resources means that resources used, consumed,